PUGET SOUND ENERGY

March 31, 2004

Ms. Carole J. Washburn, Executive Secretary
Washington Utilities and Transportation Commission
P.O. Box 47250
Olympia, Washington 98504-7250

Re: Puget Sound Energy's 2003 Electric Reliability Report

Dear Ms. Washburn:

Enclosed for filing, please find Puget Sound Energy's ("PSE" or "the Company") Electric Service Reliability Report for the calendar year 2003, pursuant to WAC 480-100-398. This document includes information previously identified in PSE's Electric Service Reliability Monitoring and Reporting Plan, initially filed on October 22, 2001, then revised based on feedback from WUTC Staff on January 18, 2002.

PSE believes the Commission, Staff, and other interested parties and individuals will find the information contained in this report of value. If you have any questions, concerns, or feedback regarding the Company's Electric Reliability Report, please contact me at (425) 456-2797.

Sincerely,

Karl R. Karzmar
Director, Regulatory Relations

Electric Service

Reliability Report

2003 Annual Report

In Compliance with WAC 480-100-398

Table of Contents

Executive Summary

This is Puget Sound Energy's (PSE or the Company) second Reliability Report which covers the calendar year 2003, as required by WAC 480-100-398 Electric Service Reliability Reports.

Information in this report is intended to help the Commission, customers and other interested parties build a better understanding of the reliability of service that PSE provides its customers.

This report provides information on electric reliability from a variety of perspectives. The first perspective includes customer input about service quality and reliability either received first hand or through the Commission. The second perspective is provided by the traditional reliability metrics, which PSE has supplied to the Commission since the merger of Washington Natural Gas and Puget Sound Power & Light Company. The third perspective is sub system information relating to cause of outage by county. In 2003 PSE received 60 complaints relating to reliability and 7 complaints relating to power quality concerns. PSE also received 20 complaints relating to reliability and 10 complaints relating to power quality through the Commission. This is discussed in Section V in this report. Section III of this report details system-wide and county reliability metrics, and Section IV details the outage causes in each county.

In 2002, 53 total complaints were received either directly by the company or through the Commission, compared to 97 in 2003. PSE has identified three main reasons for this increase in complaints including an increase in outage events, an increase in weather event days, and a more inclusive definition of customer complaint. In 2003, there was an increase in outages of approximately 8% as compared to 2002. There was also an increase in weather event days from four days in 2002 to twelve days in 2003. In 2003, PSE also simplified the process to catalog complaints. This resulted in a more inclusive definition of a “complaint” and subsequently more complaints have been identified than would have been previously.

Safe and reliable electric power at a reasonable cost is an important goal for PSE. PSE continues to caution against putting too much emphasis on the usefulness of this Annual Report in determining year-to-year trends pertaining to system performance, however PSE believes that the annual snap-shot does provide useful information to all interested parties.

Section I Background

PSE's objective is to develop the most appropriate and cost-effective means to meet customer reliability needs. In response to the Commission rulemaking procedure PSE developed a process to respond to customer complaints about reliability and power quality. This process identifies areas of greatest concern. The process is customer focused because it identifies customer complaints about reliability and power quality and plots the result graphically.

The process is triggered by a Service Order and tracking of an Inbound Client Comment in the Company's customer information system (CLX). A summary report captures the inbound comments received within the calendar year, with a comment topic of outage (frequency or duration) and/or power quality. If only one comment has been received for any one customer within a 24-month period, it will be counted as a customer "inquiry." But when two or more comments on service reliability and/or power quality have been received from a customer within the 24-month period, it will be counted as a "complaint."

PSE has identified key phrases for our Customer Service Representatives (CSR) to listen for to help categorize customer concerns. To assist the CSRs in this categorization of problems and key phrases, PSE developed a Desktop Learning tool. The Desktop Learning tool has been key to obtain accurate information from the customer and route the information to the various groups responsible to assess the customer "inquiry."

The information gathered from this process identifies specific geographic areas for actions to enhance the level of service. The Area of Greatest Concern Map (Attachment B) graphically shows the location and the number of complaints received by area. PSE also identifies specific actions the Company took or is planning to take to address each "complaint". This information is included in Attachment A.

PSE has provided the Commission with system level reliability information through the Service Quality Index (SQI) process since 1997. In this report PSE provides traditional reliability metrics at the system level (Section III) and subsystem, or county level (Section IV) in addition to the providing areas of greatest concern as reflected by customers.

PSE cautions against putting too much emphasis on the usefulness of this annual report in determining year to year trends pertaining to system performance. While traditional reliability metrics can be helpful in assessing system average reliability performance especially when trended over time, traditional reliability metrics have the following limitations:

- Traditional reliability metrics are averages and summaries of events; they do not reflect the severity of an individual event.

- Factors such as variations in weather, data collection, natural disasters, and normal random third party damage all impact year to year comparisons of system performance.

- Traditional reliability metrics don't reflect the economic value of electricity service, a utility's cost to provide it or the economic impact of an outage.

- Traditional reliability metrics don't reflect customer preference, social value or policy objectives.

Therefore in some cases, there may be little correlation between individual customer satisfaction and electric reliability as measured by traditional metrics. Assessing trends requires a longer-term perspective than looking for variations between two or three annual periods. We believe that comparing a multi-year rolling average such as five or ten years is a better tool to determine trends. With that caveat stated, PSE believes that the annual snap-shot still does provide useful information to all interested parties.

Section II Definitions

AMR - Automated Meter Reading system, which is a sophisticated communication network capable of providing the Company with certain information pertaining to sustained outages automatically.

Area of Greatest Concern - An area targeted for specific actions to improve the level of service reliability or quality that is reported in Section V—Areas of Greatest Concern.

Area of Greatest Concern Map – A plot of localized areas of concern on a geographic map. Areas include PSE complaints and concerns filed with the Commission.

Cause Codes - A list of codes used to identify the Company's best estimation of what caused a Sustained Interruption to occur. The following is the PSE Interruption Causes cause code information in the SAP system:

AO—ACCIDENT OTHER, WITH FIRES
BA—BIRD OR ANIMAL
CP—CAR/POLE ACCIDENT
CR—CUSTOMER REQUEST
DU—DIG UP UNDERGROUND
EF—EQUIPMENT FAILURE
EO—ELECTRICAL OVERLOAD
EQ—EARTHQUAKE
FI—FAULTY INSTALLATION
LI—LIGHTNING
OD—OUTSIDE DISTURBANCE; BPA LINES DOWN
OE—OPERATING ERROR
SO—SCHEDULED OUTAGE, WAS WR- WORK REQUIRED
TF—TREE - OFF RIGHT OF WAY
TO—TREE - ON RIGHT OF WAY
UN—UNKNOWN CAUSE (UNKNOWN EQUIPMENT INVOLVED ONLY)
VA—VANDALISM

CLX – Consumer LinX, PSE's customer information system.

Commission Complaint – Any single concern filed by a customer with the Washington Utility and Transportation Commission (WUTC).

Customer Complaint – When a customer is not satisfied with the resolution or explanation of their concern pertaining to Sustained Interruptions and Power Quality as indicated by two or more contacts to the Company over a 24 month period, where by, after investigation by the Company, the cause of the concern is found to be on the Company's energy delivery system.

Customer Count - The source of the data (for SAIDI and SAIFI) will be the outage reporting system that is a part of SAP, the Company's Work Management and Financial Information System.

Customer Inquiry - An event whereby a customer contacts the Company to report a Sustained Interruption or Power Quality issue or concern.

Duration of Sustained Interruption - The period (measured in minutes, or hours or days) beginning when the Company is first informed the service to a customer has been interrupted and ending when the problem causing the interruption has been resolved and the line has been re-energized. An interruption may require step restoration tracking to provide reliable index calculation. As an example, two trees could be down, one taking out a major feeder on a main street affecting numerous customers, another down the line in a side street, affecting only a few customers off that major feeder. When the major line is restored and service to most customers is resumed, it is possible that the second tree will prevent resumption of service to the smaller group of customers. The Sustained Interruption associated with the second tree is treated as a separate incident for reporting and tracking purposes.

Major Event - A catastrophic event that exceeds design limits of the electric power system and is characterized by more than 5% of the customers out of service during a 24-hour period.

Outage - The state of a component when it is not available to perform its intended function due to some event directly associated with that component. For the most part, a component's unavailability is considered an outage when it causes a sustained interruption (interruption longer than one minute) of service to customers.

Power Quality - There are no industry standards that are broad enough to be able to define power quality or how and when to measure it. For purposes of this rule, power quality includes all other physical characteristics of electrical service except for Sustained Interruptions, including but not limited to momentary outages, voltage sags, voltage flicker, harmonics and voltage spikes, etc.

SAIDI - System Average Interruption Duration Index. This index is commonly referred to as customer minutes of interruption or customer hours, and is designed to provide information about the average time the customers are interrupted. SAIDI will be calculated according to the following:

$$\text{SAIDI} = \frac{\sum \text{Duration of Sustained Interruptions (in minutes) experienced by customers}}{\text{Total number of customers served}}$$

SAIFI - System Average interruption frequency index (sustained interruptions). This index is designed to give information about the average frequency of sustained interruptions per customers over a predefined area. SAIFI will be calculated according to the following:

$$\text{SAIFI} = \frac{\text{Total number of Sustained Interruptions experienced by customers}}{\text{Total number of customer served}}$$

Step restoration - The restoration of service to blocks of customers in an area until the entire area or feeder is restored.

Sustained Interruption – Any interruption not classified as a momentary event. PSE records interruptions longer than 1 minute.

Section III - System Level Reliability

2003 System & County Level Reliability Table

System and Counties	SAIDI	SAIFI	Number of Customers	Number of Outages
System	133.39	0.804	971,969	12,239
PSE SQI Benchmarks	136.00	1.300	N/A	N/A
Whatcom	151.35	0.936	84,155	1,137
Skagit	290.04	0.852	51,899	860
Island	276.70	1.087	31,720	497
Jefferson and Kitsap	152.64	0.991	122,604	1,890
King	110.16	0.750	477,029	5,070
Kittitas	61.97	0.301	9,999	296
Pierce	96.93	0.812	89,879	962
Thurston	119.35	0.651	104,683	1,527

Section IV – Subsystem Reliability

2003 Outages by Cause

Cause	Whatcom	Skagit	Island	Jefferson	Kitsap	King	Kittitas	Pierce	Thurston	Grand Total
AO	25	26	11	14	55	121	7	38	54	351
BA	106	82	48	42	317	1002	29	111	160	1897
CP	31	23	10	7	18	103	2	27	37	258
CR	0	0	0	0	0	33	0	0	3	36
DU	28	23	8	13	73	194	12	41	39	431
EF	624	439	239	128	592	2644	220	519	822	6227
EO	4	1	2	0	6	13	0	5	8	39
EQ	0	0	0	0	0	0	0	0	0	0
FI	0	1	0	2	5	7	0	0	2	17
LI	1	1	2	1	3	13	0	3	3	27
OD	1	0	0	3	0	0	0	0	0	4
OE	0	0	0	0	0	16	1	1	2	20
SO	8	2	1	3	108	86	0	50	114	372
TF	96	97	78	75	273	485	19	39	100	1262
TO	195	158	91	34	116	240	5	90	126	1055
UN	18	7	7	0	2	110	1	37	57	239
VA	0	0	0	0	0	3	0	1	0	4

Legend

AO—ACCIDENT OTHER, WITH FIRES
BA—BIRD OR ANIMAL
CP—CAR/POLE ACCIDENT
CR—CUSTOMER REQUEST
DU—DIG UP UNDERGROUND
EF—EQUIPMENT FAILURE
EO—ELECTICAL OVERLOAD
EQ—EARTHQUAKE
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VA—VANDALISM

Section V – Areas of Greatest Concern

The areas of concern for the 2003 Reliability Report are areas where customers have identified problems with the electric delivery system. The company tracks these areas with two methods for a 24-month calendar period: 1) concerns filed with the Commission, and 2) complaints made to the Company.

For 2003, PSE received 60 complaints relating to reliability and 7 complaints relating to power quality concerns. These came through PSE's complaint process only and are shown in tabular form in Attachment A of this report, PSE Complaints Worksheet. One of these 60 complaints was filed with the Commission.

For 2003, the Commission received 20 complaints relating to reliability and 10 complaints relating to power quality of PSE's energy delivery system. Attachment B is the list of these complaints. Those complaints shown on Attachment A that are duplicated on Attachment B are highlighted with an asterisk on both attachments.

Attachment C is the Areas of Greatest Concern Map for 2003. It includes the 2003 complaints as defined by the PSE process and those complaints filed with the Commission. For plotting purposes, where a customer has complained of both a reliability and power quality concern, the complaint has been plotted under the reliability symbol. Attachment E is Areas of Greatest Concern Map for 2002 for reference and comparison.

Section VI - Major Events

In the calendar year 2003 there were twelve days that were classified as Major Event Days. The dates were January 3, October 16 – 19, and December 4 - 10, 2003. A Major Event is a catastrophic event that exceeds design limits of the electric power system and is characterized by more than 5% of the customers out of service during a 24-hour period.

MAJOR EVENTS OF 2003			
Major Event Date	**Customer Out of Service**	**% Customer Out of Service**	**Total Customers**
January 3	77,491	8%	962,026
October 16-19	120,718	12%	975,359
December 4-10	271,982	28%	979,984

Section VII - Data Collection - Methods and Issues

This section explains how PSE will collect the underlying data for each annual report, for the measures described above. Each annual report will include a section on data collection methods and issues. The section will include an explanation of how the various data were collected. Changes in methods from prior reporting periods will be highlighted and the impact of the new method on data accuracy will be discussed in each annual report.

No changes in data collection methods have been made since the original filing in 2002. However, in 2003, PSE did simplify the process to catalog complaints. In 2003, a complaint has been recorded if a customer contacted PSE about either a reliability or power quality inquiry twice in a 24-month period. In 2002, a complaint would be noted if a customer contacted PSE about the same type of concern in a 24-month period (i.e., two power quality inquiries). PSE believes that this more inclusive definition of complaint simplifies the process and more accurately reflects customers concerns. PSE also believes this more inclusive definition resulted in more "complaints" being identified and has partly contributed to the increase in complaints recorded in 2003.

<u>Methods for Identifying a Sustained Interruption/When Interruption Duration Measurement Begins</u>

A. Customer calls the Company's customer access center, either through the automated voice response unit or talking with a customer representative.
B. Customer calls to a PSE employee other than through the customer access center.
C. Automated system information from the Company's AMR system.
D. Possible Causes of Data Inconsistencies:
    1. If service to a customer that previously was affected by a service interruption remains out after the problem suspected to have caused the interruption has been corrected, a follow-up call from the customer may be reported as a new incident. This can especially be the case using Step Restoration.
    2. Customers may call to report a Sustained Interruption that was caused by their own equipment and not shared by other customers. If the customer's power has been restored before crews arrive to investigate, the incident may still be reported as a sustained interruption.
    3. It is likely, as with any computer information system, that the AMR reports may provide reports on some outages that were not verified. The number of such false reads, if any, has not been established.
    4. Data entry mistakes can create inconsistencies.
    5. Major storm event will have an impact on data accuracy. In general, data accuracy is inversely proportional to the magnitude of the storm event.

Methods to Specify When the Duration of a Sustained Interruption Ends

A. Service personnel will log the time when the problem causing the outage has been resolved.
B. Possible Causes of Data Inconsistencies:
    1. There may be multiple layers of issues contributing to a Sustained Interruption for a specific customer as described in the definition of Duration of Sustained Interruption.
    2. Data entry errors can affect the accuracy of the information.

Recording Cause Codes

A. Outage cause codes are reported by the PSE service personnel responding to the outage location.
B. Possible Causes of Data Inconsistencies.
    1. Major storm event will have an impact on data accuracy. In general, the greater the storm the less time spent in recording accurate data up front due to the focus on the restoration effort.
    2. The cause of the outage and the location of the protective device may be a significant distance. Pinpointing the exact location of the outage and the cause is secondary to the outage restoration effort.
    3. Tracking the distribution feeder to find temporary or momentary contacts with the distribution system is difficult.
    4. A series of outages effecting a group or groups of customers at the same time or approximate times with several causes are difficult to capture.
    5. Determining the differences between different cause codes is difficult in cross- country terrain and in the darkness.

Recording and Tracking Customer Complaints

A. Customer complaints will be tracked in CLX by personnel that follow-up customer inquiries related to Power Quality and Sustained Interruptions.
B. In 2002 PSE implemented some enhancements to the process of logging inbound comments from customers in CLX, simplifying the number of topic and sub-topics to ensure greater data quality. PSE also enhanced the process to ensure customer feedback received outside of the customer service center (e.g., inquiries to field engineering) was posted to CLX inbound comments, thus improving our ability to track customer inquiries related to outages frequency, duration and/or power quality.
C. Possible Causes of Data Inconsistencies.
    1. Using the manual process, it is possible that the feedback loop may occasionally not be closed due to data entry and tracking errors. PSE will minimize this inaccuracy by having the team involved with responding to

inquiries, who are most knowledgeable about the specific situation, track Customer Complaints.

2. Sources of inaccuracy include improper data entry. PSE will minimize this inaccuracy by having the team involved with responding to inquiries, who are most knowledgeable about the specific situation, track Customer Complaints, which will help catch errors in data entry.
3. High volumes of Customer Inquiries, during storms for example, may increase the likelihood of data entry errors, leading to less accurate information.

ATTACHMENT A

PSE ELECTRIC SERVICE REPORT

2003 Annual Report

2003 PSE COMPLAINTS WORKSHEET

IDENTIFIED BY CLX PROCESS

2003 PSE COMPLAINTS

Date of Complaint	Location	Circuit	Complaint Type	Response	Action by PSE
Mar 2003 Apr 2003	Bellevue, WA	KWH 25	Power Quality	Set recording voltmeter.	Followed up with necessary repairs.
Feb 2003 Feb 2003	Bellevue, WA	NRU 25	Power Quality	Set recording voltmeter.	Followed up with necessary repair.
* Feb 2003 Feb 2003 Commission Complaint	Olympia, WA	JHO 12	Power Quality	Set recording voltmeter.	Could not find any problem on PSE side of meter. Commission upheld PSE noting not able to determine source of surges; problem on customer side of the meter .
Mar 2003 Apr 2003	Renton, WA	FWD 15	Power Quality	Set recording voltmeter.	Will monitor this situation.
Oct 2003 Oct 2003	Silverdale, WA	SIL 13	Power Quality	Contacted customer to discuss concerns.	Checked all service connections – OK. Also removed tree limb on line.
Nov 2002 Sep 2003	Tumwater, WA	AIR 25	Power Quality	Contacted customer to discuss concerns.	Followed up with necessary repairs.
Oct 2003	Burien, WA	NNO 16	Power Quality	Contacted customer to discuss voltage sags. Unable to reach customer.	Mailed information to customer.
Dec 2002 Jul 2003	Auburn, WA	KCR 17	Reliability	Contacted customer to discuss concerns.	Will monitor this situation.
Oct 2003 Nov 2003	Auburn, WA	MVW 13	Reliability	Contacted customer to discuss concerns.	Will monitor this situation.
Jan 2003 Sep 2003	Bainbridge Island, WA	PMA 16	Reliability	Contacted customer to discuss concerns.	Will evaluate area for reliability improvement in 2004-2005.

Date of Complaint	Location	Circuit	Complaint Type	Response	Action by PSE
Dec 2002 Mar 2003	Bellevue, WA	LOC 23	Reliability	Contacted customer to discuss concerns.	Followed up with infra-red inspection of underground vaults. No underground components found heating. Will monitor this situation
Dec 2003 Dec 2003	Bellevue, WA	PHA 13	Reliability	Contacted customer to discuss concerns.	Will evaluate area for reliability improvement in 2004-2005.
Oct 2003 Dec 2003	Bellevue, WA	KWH 25	Reliability & Power Quality	Contacted customer to discuss concerns.	Customer's circuit was trimmed in 2002. Serviceman performed repairs to service line.
Jul 2003 Aug 2003	Bellevue, WA	SBE 26	Reliability	Contacted customer to discuss concerns.	Portion of cable loop replaced. Remediation of remaining cables scheduled for 2004.
Nov 2003 Nov 2003	Bellevue, WA	SOM 15	Reliability	Contacted customer to discuss concerns.	Feeder rebuild scheduled for 2004. Will be addressing reliability concerns at a Somerset HOA meeting.
Dec 2002 Nov 2003	Bellevue, WA	SOM 15	Reliability	Customer concerns documented in CLX.	Feeder rebuild scheduled for 2004. Will be addressing reliability concerns at a Somerset HOA meeting.
Dec 2002 Jul 2003	Bellevue, WA	SOM 15	Reliability	Customer concerns documented in CLX.	Will evaluate area for reliability improvement in 2004-2005.
Oct 2003 Oct 2003	Bellingham, WA	BRI 14	Reliability	Contacted customer to discuss concerns.	Cable that failed in 2003 is scheduled to be replaced and an existing splice vault is to be converted to a j-box allowing faster outage restoration.
Jul 2003 Jul 2003	Blaine, WA	BCH 12	Reliability	Contacted customer to discuss concerns.	Project to eliminate outage concerns completed in 2003.

Date of Complaint	Location	Circuit	Complaint Type	Response	Action by PSE
Jul 2003 Jul 2003	Blaine, WA	BCH 12	Reliability	Contacted customer to discuss concerns.	Project to eliminate outage concerns completed in 2003.
Mar 2003 Apr 2003	Bonney Lake, WA	BON 17	Reliability	Contacted customer to discuss concerns.	Will monitor this situation.
Jul 2003 Dec 2003	Bothell, WA	WAY 13	Reliability	Contacted customer to discuss concerns.	Cable remediation project completed in 2003.
Sep 2002 Sep 2003	Bremerton, WA	TRA 22	Reliability	Contacted customer to discuss concerns.	Will propose reliability improvement project in 2004-05 construction.
Sep 2003 Sep 2003	Duvall, WA	DUV 13	Reliability	Contacted customer to discuss concerns.	Will evaluate area for reliability improvement in 2004-2005.
Mar 2003 Apr 2003	Easton, WA	ETN 13	Reliability	Contacted customer to discuss concerns.	Trees trimmed along circuit in 2003. Will evaluate area for reliability improvements in 2004-2005.
Oct 2002 May 2003	Edgewood, WA	EDG 13	Reliability	Customer contacted regarding scheduled outage	Revised scheduled outage to not impact customer
Sep 2003 Sep 2003	Issaquah, WA	FAL 15	Reliability	Contacted customer to discuss concerns.	Animal guards installed on 3 transformers in 2003.
Sep 2003 Oct 2003	Issaquah, WA	EGT 12	Reliability	Contacted customer to discuss concerns.	At the time of the outage PSE replaced both the transmission and distribution structure at this critical location. Installation of tree wire and underground a portion of Upper Preston Rd scheduled for 2004.

Date of Complaint	Location		Complaint Type	Response	Action by PSE
Jun 2003 Oct 2003	Issaquah, WA	GOO 16	Reliability	Contacted customer to discuss concerns.	PSE replaced jbox that was the cause of the outage.
Dec 2003 Dec 2003	Kent, WA	BDI 12	Reliability	Contacted customer to discuss concerns.	Will monitor this situation.
Sep 2002 Dec 2003	Kent, WA	FWD 17	Reliability	Contacted customer to discuss concerns.	Level of service should go back to normal once the road project is complete.
Nov 2003 Dec 2003	Kent, WA	FWY 15	Reliability	Contacted customer to discuss concerns.	Will monitor this situation.
May 2003 Aug 2003	Kent, WA	NOP 23	Reliability	Contacted customer to discuss concerns.	Voltage is good at transformer. Customer satisfied.
Dec 2003 Dec 2003	Kent, WA	SEQ 13	Reliability	Contacted customer to discuss concerns.	Will install a recloser and sectionalizer on this circuit in 2004.
Oct 2003 Dec 2003	Kent, WA	SOO 23	Reliability	Contacted customer to discuss concerns.	Installation of a recloser, removal of trees, and installing tree wire scheduled for 2004.
May 2002 May 2003	Kent, WA	KNT 23	Reliability & Power Quality	Contacted customer to explain outages.	Underground cable remediation scheduled for 2004.
Jul 2003 Jul 2003	Kirkland, WA	CWD 24	Reliability & Power Quality	Contacted customer to discuss concerns.	Will evaluate area for tree wire project.
Nov 2003 Nov 2003	Kirkland, WA	HOU 23	Reliability	Contacted customer to discuss concerns.	Replaced secondary cable. No further action needed.
Dec 2002 May 2003	Kirkland, WA	ING 15	Reliability	Contacted customer to discuss concerns.	Will evaluate area for tree wire project in 2004 – 2005.

Date of Complaint	Location		Complaint Type	Response	Action by PSE
Dec 2002 Jan 2003	Kirkland, WA	NHL 15	Reliability	Contacted customer to discuss concerns.	Tree wire installed in 2003.
Jan 2003 Jan 2003	Kirkland, WA	NHL 15	Reliability	Established service order to check circuit.	Fused lateral tap went out during major windstorm. Will monitor this situation and evaluate appropriate solution..
Sep 2003 Sep 2003	Kirkland, WA	WAY 16	Reliability	Contacted customer to discuss concerns.	Will monitor this situation and evaluate appropriate solution.
Aug 2003 Oct 2003	Lacey, WA	LAC 17	Reliability	Contacted customer to discuss concerns.	The cable remediation project completed in 2003.
Nov 2002 Jun 2003	Lacey, WA	LAC 17	Reliability	Contacted customer to discuss concerns..	Cable remediation project completed in 2003. Tree trimming and tree watch completed in 2002
Oct 2003 Oct 2003	Langley, WA	BRO 16	Reliability	Contacted customer to discuss concerns. .	Vegetation Management will investigate and recommend preventative measures.
Jul 2003 Aug 2003	Lynden, WA	LYN 26	Reliability	Contacted customer to discuss concerns.	Customer served from alternate source, isolating failed cable.
Apr 2002 Feb 2003	Maple Valley, WA	LWS 15	Reliability	Contacted customer to discuss concerns.	Will monitor this situation.
Jul 2003 Jul 2003	Maple Valley, WA	MIR 17	Reliability	Contacted customer to discuss concerns.	Advised customer to have an electrician repair weatherhead.

Date of Complaint	Location		Complaint Type	Response	Action by PSE
Dec 2002 Dec 2003	Mercer Island, WA	SME 12	Reliability	Contacted customer to discuss concerns.	Installation of overhead tie scheduled in 2004.
Dec 2003 Dec 2003	Mercer Island, WA	SME 12	Reliability	Contacted customer to discuss concerns.	Will monitor this situation.
Aug 2003 Sep 2003	Olympia, WA	ROC 16	Reliability	Contacted customer to discuss concerns.	Cable remediation project completed in 2003.
Oct 2003 Dec 2003	Pt. Townsend, WA	DIS 12	Reliability	Contacted customer to discuss concerns.	Will evaluate area for reliability improvement in 2004 - 2005.
Feb 2003 Feb 2003	Puyallup, WA	CED 16	Reliability	Contacted customer to discuss concerns.	Will monitor this situation.
Aug 2003 Oct 2003	Puyallup, WA	GAR 16	Reliability	Contacted customer to discuss concerns.	Cable remediation project completed in 2003.
Mar 2003 Apr 2003	Quilcene, WA	SIL 13	Reliability	Contacted customer to discuss concerns.	Will monitor this situation.
Mar 2003 May 2003	Redmond, WA	EVE 23	Reliability	Contacted customer to discuss concerns.	Cable remediation project scheduled for 2004.
Mar 2003 Apr 2003	Redmond, WA	KWH 25	Reliability	Contacted customer to discuss concerns.	Will evaluate area for tree wire project
Jun 2003 Sep 2003	Redmond, WA	RED 23	Reliability	Contacted customer to discuss concerns.	Will monitor this situation and evaluate appropriate solution.
Mar 2003 Apr 2003	Renton, WA	GRA 15	Reliability	Contacted customer to discuss concerns.	Rebuild of the underground system completed in 2003.
Nov 2003 Dec 2003	Renton, WA	HAZ 13	Reliability	Contacted customer to discuss concerns.	Will monitor this situation.
Dec 2003 Dec 2003	Renton, WA	MAP 15	Reliability	Contacted customer to discuss concerns.	Will evaluate area for reliability improvement in 2004 - 2005.

Date of Complaint	Location		Complaint Type	Response	Action by PSE
Nov 2003 Nov 2003	Sammamish, WA	PIN 23	Reliability	Contacted customer to discuss concerns.	Will monitor this situation.
Oct 2003 Oct 2003	Sammamish, WA	SAH 15	Reliability	Contacted customer to discuss concerns.	Will evaluate area for tree wire project in 2004-2005.
Dec 2003 Dec 2003	Sammamish, WA	SAH 15	Reliability & Power Quality	Attempted to contact customer to discuss concerns. Unable to contact customer.	Will evaluate area for tree wire project.
Dec 2003 Dec 2003	Sammamish, WA	SAH 15	Reliability	Contacted customer to discuss concerns.	Will evaluate area for tree wire project in 2004 - 2005.
Oct 2003	Snoqualmie Pass, WA	HYA 13	Reliability	Contacted customer to discuss concerns.	At time of outage replaced multiple feeder and 1/0 cables and padmount switch U594.
Dec 2002 Dec 2003	Woodinville, WA	COT 16	Reliability	Contacted customer to discuss concerns.	Will evaluate area for tree wire project in 2004 -2005.

ATTACHMENT B

PSE ELECTRIC SERVICE RELIABILITY REPORT

2003 Annual Report

2003 CONCERNS FILED WITH COMMISSION

2003 CONCERNS FILED WITH COMMISSION

PSE has provided the Commission with background information on all of the following concerns.

No.	Date of Complaint	Location	Complaints
1	1/3/2003	Silverdale	RELIABILITY
2	1/6/2003	Woodinville	RELIABILITY
3	1/6/2003	Kingston	RELIABILITY
4	1/8/2003	Kirkland	RELIABILITY
5	1/16/2003	Redmond	RELIABILITY
6	3/13/2003	Yelm	RELIABILITY
7	4/20/2003	Yelm	RELIABILITY
8	7/1/2003	Langley	RELIABILITY
9	7/21/2003	Kent	RELIABILITY
10	7/24/2003	Olympia	RELIABILITY
11	8/18/2003	Redmond	RELIABILITY
12	8/18/2003	Puyallup	RELIABILITY
13	8/18/2003	Puyallup	RELIABILITY
14	7/21/2003	Kent	RELIABILITY
15	8/26/2003	Olympia	RELIABILITY
16	9/19/2003	Bellevue	RELIABILITY
17	9/30/2003	Olympia	RELIABILITY
18	10/3/2003	Olympia	RELIABILITY
19	11/19/2003	Olympia	RELIABILITY
20	12/9/2003	Issaquah	RELIABILITY
21	1/24/2003	Rainier	POWER QUALITY
* 22	2/4/2003	Olympia	POWER QUALITY
* 23	2/11/2003	Olympia	POWER QUALITY
24	3/21/2003	Redmond	POWER QUALITY
25	4/25/2003	Kirkland	POWER QUALITY
26	6/28/2003	Suquamish	POWER QUALITY
27	7/15/2003	Port Orchard	POWER QUALITY
28	8/19/2003	Bothell	POWER QUALITY
29	9/2/2003	Bellingham	POWER QUALITY
30	9/16/2003	Kenmore	POWER QUALITY

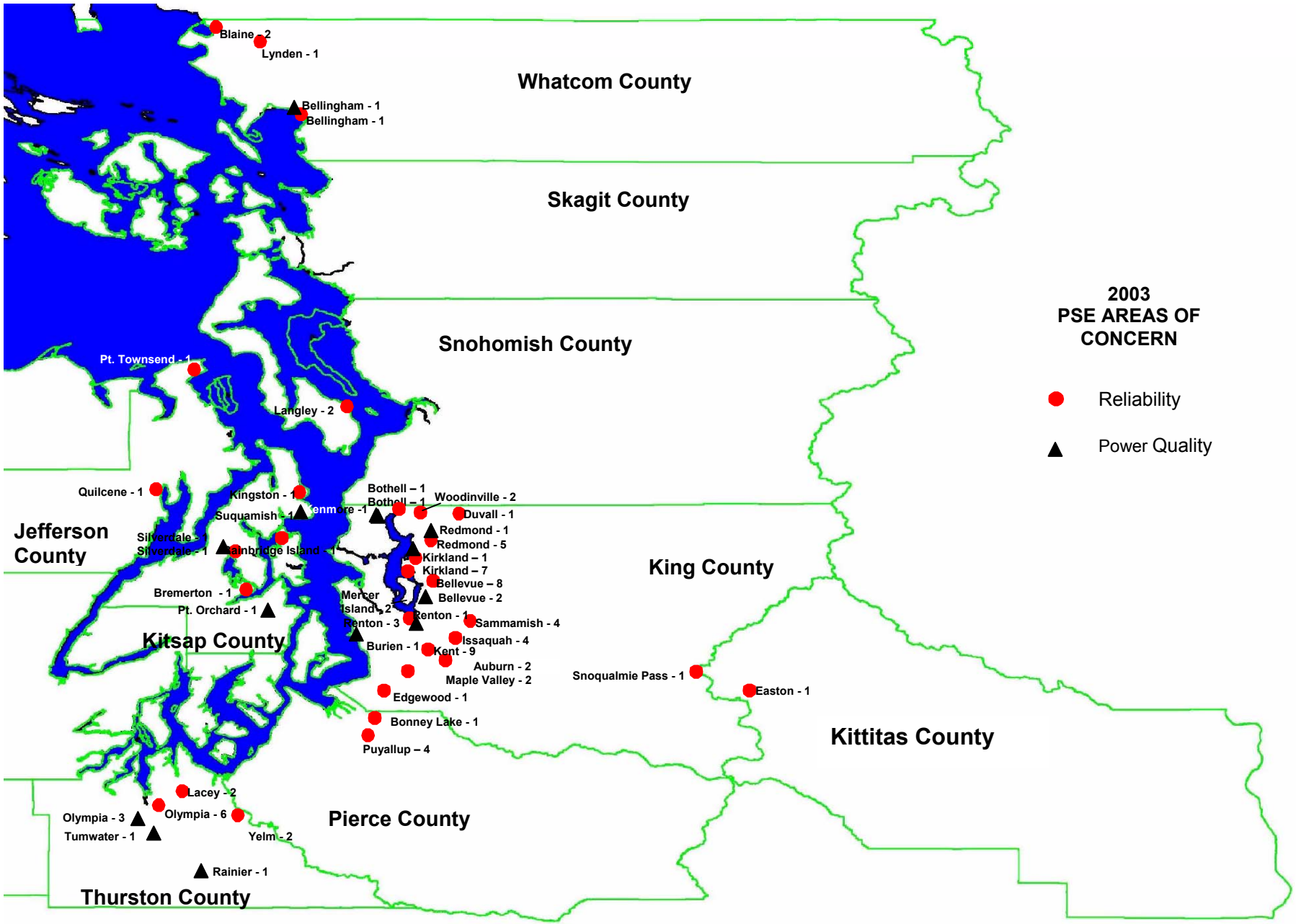
* - Customer complained two times regarding power quality concerns. Complaint duplicated on Attachment A.

ATTACHMENT C

PSE ELECTRIC SERVICE RELIABILITY REPORT

2003 Annual Report

2003 AREAS OF GREATEST CONCERN MAP


Whatcom County
Skagit County
Snohomish County
King County
Kittitas County
Pierce County
Kitsap County
Jefferson County
Thurston County
Blaine - 2
Lynden - 1
Bellingham - 1
Bellingham - 1
Pt. Townsend - 1
Langley - 2
Quilcene - 1
Kingston - 1
Suquamish - 1
Silverdale - 1
Silverdale - 1
Bainbridge Island - 1
Bremerton - 1
Pt. Orchard - 1
Bothell – 1
Bothell – 1
Woodinville - 2
Duvall - 1
Redmond - 1
Redmond - 5
Kirkland – 1
Kirkland – 7
Bellevue – 8
Bellevue - 2
Mercer Island - 2
Renton - 1
Renton - 3
Sammamish - 4
Issaquah - 4
Burien - 1
Kent - 9
Auburn - 2
Maple Valley - 2
Edgewood - 1
Bonney Lake - 1
Puyallup – 4
Snoqualmie Pass - 1
Easton - 1
Lacey - 2
Olympia - 3
Olympia - 6
Tumwater - 1
Yelm - 2
Rainier - 1
2003
PSE AREAS OF
CONCERN
Reliability
Power Quality

ATTACHMENT D

PSE ELECTRIC SERVICE RELIABILITY REPORT

2003 Annual Report

2002 AREAS OF GREATEST CONCERN WORKSHEET
IDENTIFIED BY CLX PROCESS
WITH PSE FOLLOW UP ACTION

2002 AREAS OF CONCERN
LISTED IN CLX
WITH FOLLOW-UP ACTION BY PSE

	Date of Complaint	Location	Complaint	Response	Action by PSE	Follow Up On Action Taken by PSE
1	12/19/2002 Commission Complaint 8/30/2002	Woodinville	Reliability	PSE provided outage history to WUTC September 4, 2002	Reconductoring 4 major sections of the circuit with tree wire. Tree wire projects in 1999, 2000 and 2002.	Cable remediation project scheduled in 2004. SCADA monitoring with control on distribution breakers scheduled in 2004.
2	12/2/2002	Auburn	Reliability	First Response Engineer contacted customer and discussed outage concerns.	Extended the feeder to the south end of Lakeland Hills Master Development Community. The feeder extension should move a portion of the south end load and the new commercial load onto the new switch and reduce the outage frequency.	No further action needed.
3	8/15/2002 Commission Complaint 7/31/2002	Bellevue	Reliability	WUTC complaint - PSE responded to commission 8/15/2002.	Replaced two switches & failed cables in 2002; two additional outages of cables affected by original outage area; replaced remaining cables in 1/0 loop in Dec 2002	Replacement work of 2002 resolved underground outage problems. No further outages in 2003.
4	9/16/2002 Commission Complaint 9/16/2002	Bellevue	Reliability	WUTC complaint - PSE responded to commission 11/27/2002.	Cable remediation project completed in February of 2003.	No further action needed.

	Date of Complaint	Location	Complaint	Response	Action by PSE	Follow Up On Action Taken by PSE
5 and 6	12/16/2002 12/16/2002	Bellevue	Reliability	Customer contacted; Planning and Community Relations representatives addressed the Somerset Homeowners' Association on 1/21/2003.	Cable remediation project completed in March of 2003.	Substantial feeder rebuild scheduled for 2004.
7	10/05/2002	Enumclaw	Reliability	First Response Engineer contacted customer and discussed outage concerns.	Cable to be replaced in 2003.	Cable replacement project completed in 2003.
8	10/25/2002	Issaquah	Reliability	First Response Engineer contacted customer and discussed outage concerns.	Tree trimming is scheduled for the first quarter of 2003.	Tree trimming performed between 12/1/02 and 4/1/03
9	11/06/2002	Bremerton	Reliability	First Response Engineer contacted customer and discussed outage	Outage due to both overhead and underground causes. Will continue to monitor.	Revised circuitry to reduce the impact of any single outage.
10	10/14/2002	Bremerton	Reliability	First Response Engineer contacted customer and discussed outage concerns.	The cable replacement work is scheduled for spring of 2003.	Silicon injection completed in 2003. No further action needed.
11	09/06/2002	Puyallup	Reliability	First Response Engineer contacted customer and discussed outage concerns .	Cable remediation completed in spring of 2003.	No further action needed.

	Date of Complaint	Location	Complaint	Response	Action by PSE	Follow Up On Action Taken by PSE
12	04/16/2002	Anacortes	Reliability	Letter sent to the customer on 6/26/02 explaining what we have done and will be doing to improve reliability	A recloser was installed at the corner of Highway 20 and Campbell Lake Road during the last quarter of 2002. Records indicated four (4) outages over the past three years were all tree related. Tree trimming completed during the first quarter of 2002.	Recloser has isolated tree related outages. No further action needed.
13	4/9/2002 Commission Complaint 1/17/2002	Tenino	Reliability	PSE responded to the commission complaint. A detailed outage history was provided to the commission.	Area is rural with lots of vegetation exposure. Various equipment failures have also occurred. Will continue to monitor.	Will monitor for emerging reliability projects.
14	11/16/2002 Commission Complaint 10/31/2002	Tumwater	Reliability	PSE responded to the commission complaint on 11-4-02 and again on 11-19-02. A detailed outage history was provided to the commission.	A cable remediation project for Lake Susan is funded for 2003. Tree trimming was completed in 2002.	No further action needed.
15	11/16/2002	Tumwater	Reliability	The first response engineer spoke to the customer and explained that most of the outages were equipment failures.	A cable remediation project for Lake Susan is funded for 2003. Vegetation Management cycle completed in 2002.	No further action needed.
16	8/2/2002 Commission Complaint 8/2/2002	Olympia	Reliability	WUTC closed the complaint on 8-23-02. A detailed outage history was provided to the commission.	Cable remediation project scheduled for spring 2003	Cable remediation project completed in 2003.
17	01/14/2002	Olympia	Reliability	First Response Engineer contacted customer and discussed outage concerns.	No action at this time. PSE continues to monitor this situation.	Will monitor for emerging reliability projects.

	Date of Complaint	Location	Complaint	Response	Action by PSE	Follow Up On Action Taken by PSE
18	10/18/2002	Olympia	Reliability	Customer contacted to discuss outage concerns	Cable Remediation is funded for 2003.	Cable replacement project completed in 2004.
19 thru 22	10/16/2002 10/22/2002 11/06/2002 11/06/2002	Pt. Roberts	Reliability	First Response responded to customer on November 19 and informed customer that there are plans to replace the cables.	Replaced 2/3 of the underground cables in the vicinity of the Point Roberts Marina in November and December 2002. The remaining cables serving the residential area at the Marina will be replaced in early 2003 (engineering is complete, shoreline permits needed) .	Cable replacement project completed in 2003. New reclosers installed at Pt. Roberts substation.
23	10/22/2002	Pt. Roberts	Power Quality	First Response responded to customer by phone.	Replaced 2/3 of the underground cables in the vicinity of the Point Roberts Marina in November and December 2002. The remaining cables serving the residential area at the Marina will be replaced in early 2003 (engineering is complete, shoreline permits needed).	Cable replacement project completed in 2003. New reclosers installed at Pt. Roberts substation.
24	10/17/2002	Nordland	Power Quality	Engineer discussed voltage flicker issue with customer.	PSE set a recording voltmeter. The transformer was replaced on January 14, 2003.	No further action needed.

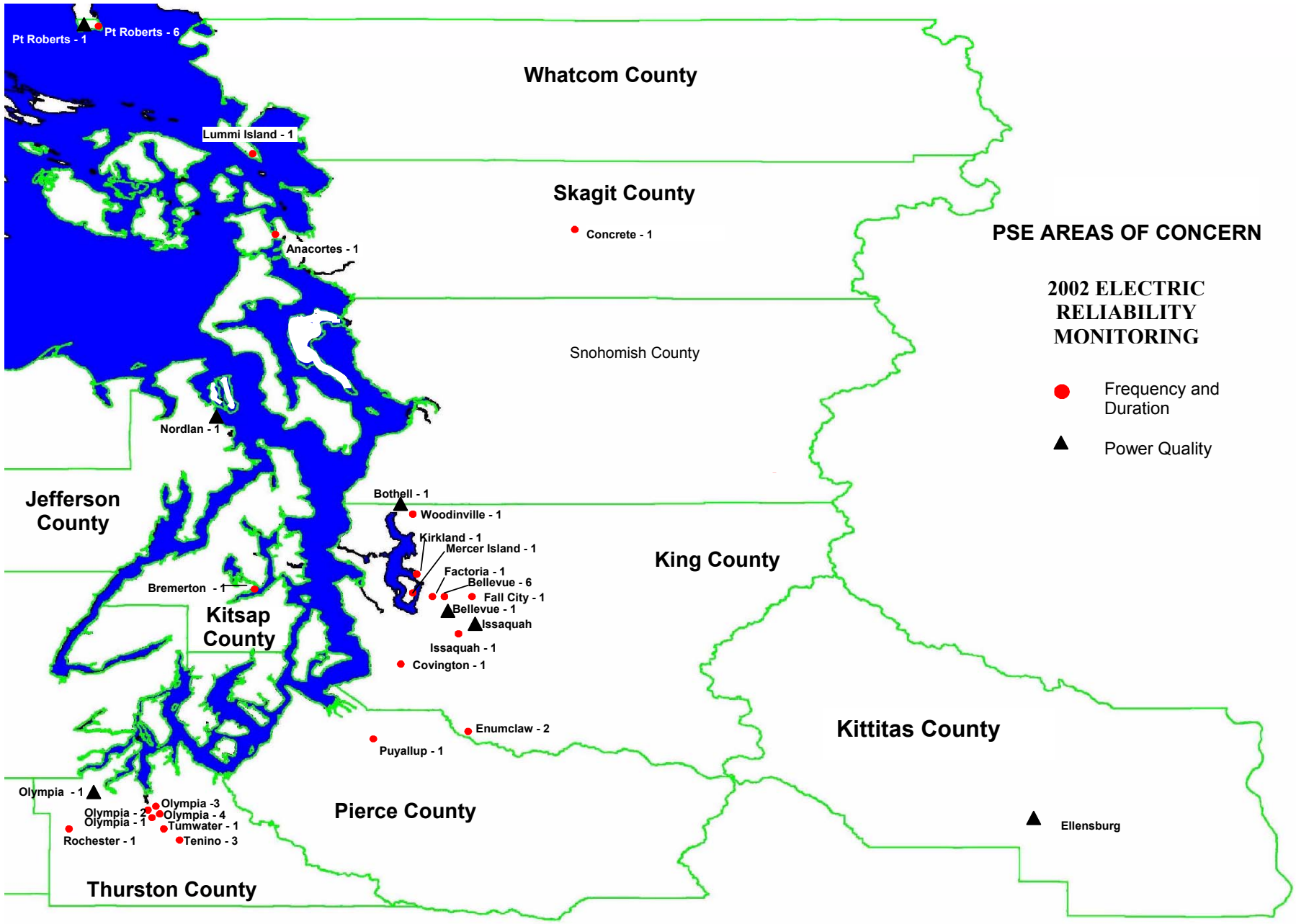
	Date of Complaint	Location	Complaint	Response	Action by PSE	Follow Up On Action Taken by PSE
25	12/16/02	Olympia	Power Quality	Customer called in on 11/7/02 to report low voltage. On 12/13/02 service man went out to check on the low voltage.	PSE test verified normal system voltage.	No further action needed.

ATTACHMENT E

PSE ELECTRIC SERVICE RELIABILITY REPORT

2003 Annual Report

2002 AREAS OF GREATEST CONCERN MAP


Pt Roberts - 1
Pt Roberts - 6
Whatcom County
Lummi Island - 1
Skagit County
Concrete - 1
Anacortes - 1
PSE AREAS OF CONCERN
2002 ELECTRIC RELIABILITY MONITORING
Snohomish County
Frequency and Duration
Power Quality
Nordlan - 1
Jefferson County
Bothell - 1
Woodinville - 1
Kirkland - 1
Mercer Island - 1
King County
Factoria - 1
Bellevue - 6
Fall City - 1
Bellevue - 1
Issaquah
Issaquah - 1
Bremerton - 1
Kitsap County
Covington - 1
Enumclaw - 2
Kittitas County
Puyallup - 1
Olympia - 1
Olympia -3
Olympia - 2
Olympia - 4
Olympia - 1
Tumwater - 1
Pierce County
Ellensburg
Rochester - 1
Tenino - 3
Thurston County